

OMALVING K.

a collective farm situated near Vinnitsa, Ukraine.  
Population: 7,000; 1971 figure. (U.S.S.R.)

The University which is affiliated with the collective farm  
is located in the town of Vinnitsa.  
(Vinnitsa Province--Plywood)

OTKALENKO, K.

Extensions of farm buildings. Sill'. bud. 9 no.2:7 F '59.  
(MIRA 12:6)

1. Nachal'nik Vinnitskogo oblastnogo upravleniya po stroitel'stvu  
v kolkhozakh.  
(Vinnitsa Province--Farm buildings)

S/102/63/000/001/002/004  
D201/D308

AUTHOR: Otkimezuri, H.L. (Tbilisi) G

TITLE: The Rosenblatt theorem and the perceptron type of system

PERIODICAL: Avtomatyka, no. 1, 1963, 10-23

TEXT: The author considers the meaning and the proof of the two theorems of statistical separability of V. Rosenblatt (Two theorems of statistical separability in the Perceptron, 10-th Symposium on the mechanization of Thought Processes, 1959). The drawbacks and limitations of both theorems are discussed. Suggestions are made for the simplification of the proofs and for the expansion of the field of applications of both theorems. Two variants of the self-adapting perceptron-type systems are suggested: (1) a system with the optimizing controller in the perceptron-type recognition system 'Alpha' replaced by local positive feedback and (2) a 'delta' perceptron-type system with a second type of positive feedback for self-adaptation of sensing elements. There are 3 figures and 1 table.

SUBMITTED: June 12, 1962

Card 1/1

IVAKHNO, A.G.; KLEINOV, G.V.; OTRIMENOV, G.I.; SHVARTZ, ... .

short monograph on the theory of perception (review of P. Rosenthal's book "Principles of neurodynamics.") Avtom. spis. i vych. tekhn. no.6:332-340 '64.  
(MIRA 17:10)

ACCESSION NR: AP4026844

8/0102/64/000/002/0059/0070

AUTHOR: Oikhmesuri, G. L. (Tiflis)

TITLE: Recognition of speech sounds by self-organizing systems with two positive feedbacks

SOURCE: Avtomatyka, no. 2, 1964, 59-70

TOPIC TAGS: speech, speech sound, speech sound recognition, automatic speech sound recognition, selforganizing automatic system

ABSTRACT: Speech signal subdivision into phonemes is explained. The use of "Alpha" and "Delta"-type self-organizing systems (after Dreyfus-Graf) for speech sound recognition is discussed. The advantages of self-organizing systems over determinate systems in speech-sound recognition are shown. A block diagram is proposed for dividing the speech sounds into vowels and consonants; additional couplings are claimed to have improved the recognition

Card 1/2

ACCESSION NR: AP4026844

part of a self-organizing system. Some results of experiments with a self-organizing single-positive-feedback system are reported: phonetically very different sounds were recognized. Orig. art. has: 5 figures and 6 formulas.

ASSOCIATION: none

SUBMITTED: 09Sep63

DATE ACQ: 17Apr64

ENCL: 00

SUB CODE: EC, DP

NO REF Sov: 003

OTHER: 001

Card 2/2

L 12482-63

EWT(d)/BDS AFFTC/APGC/ASD

Pg-4/Pk-4/P1-4/Po-4/Pq-4 BC/IJP(C)  
S/102/63/000/002/005/007

AUTHOR:

Otkhmezuri, G. L., (Tbilisi)

TITLE:

Properties of signs and sixth positive feedback

PERIODICAL: Avtomatyka, no. 2, 1963, 41-52

73

TEXT: 9 The rapid development of science and technology demands more and more advanced systems for control of complex objects. Despite the fact that automation has made significant advances many problems of control are still unsolved. This applies to extremely complex objects where the processes which occur are sometimes functions of completely unpredictable and random phenomena. Many control problems cannot be solved by the already existing methods of control. This article introduces an indicator of usefulness of independent signs, taking into account the conditional probability of the sign in the presence of an image. The properties of the "Al'fa" cognitive system with sixth positive feedback are considered. It is shown that the presence of neutral signs deteriorates this system. The dependence between the number of diagonal signs and the reliability of recognition is derived. The article contains one figure and a 2 item bibliography.

Card 1/1

IVAKHNENKO, A.G. [Ivakhnenko, O.H.], KLESHCHEV, V.V. [Klieshchov, V.V.];  
OTKHMEZURI, G.L. [Otkhmezuri, H.L.]; SHLEZINGER, M.I.

Fundamental work in the theory of perceptrons; a review of  
"Principles of neurodynamics", a book by P.Rosenblatt. Avtomatyka  
8 no.3:34-38 '63. (MIRA 16:7)  
(Perceptrons) (Cybernetics) (Rosenblatt, F.)

OTKHMEZURI, G.L. (Tbilisi)

Concerning Rosenblatt's theorem and perceptron-type systems.

Avtomatyka 3 no.110-23 '63.

(MRA 16.)

(Electronic computers)

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2

OTK-CHURCH, G.L. (MILIT)

...and "self-reliant" type of cognitive systems with positive feedback. Autonav. 1978 '65. (MIRA 1986,

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2"

L 01036-67 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) GD

ACC NR. AT6015124 (N) SOURCE CODE: UR/0000/65/000/000/0003/0018

65  
B+1

AUTHOR: Oikhmezuri, G. L.

ORG: none

TITLE: Positive-feedback systems capable of self-organizing 14

SOURCE: AN GruzSSR. Institut elektroniki, avtomatiki i telemekhaniki. Skhemy avtomaticheskogo upravleniya (Automatic control circuits). Tiflis, Izd-vo Metsniyereba, 1965, 3-18

TOPIC TAGS: automatic control, automatic control system, automatic control theory

ABSTRACT: A self-organizing system with determinate sensors is considered which consists of many associative cells; each cell of a group has a transfer factor which, before the group is organized, takes on only two values, +1 and -1, with equal probabilities. The probability of an indefinite response to a first test is determined for a system consisting of two groups A and B. The probability of spontaneous organization of this simplest system is evaluated; the formulas are extended on an A-B-C-group system and finally generalized to cover a k-group system. The

Cord 1/2

L 01036-67

ACC NR: AT6015124

resulting model can operate with determinate sensors but, strictly speaking, is incapable of classification. Hence, two types of positive feedback for selecting informative indicants are considered. The feedback improves system resolution and cuts down to a fraction the number of required associative elements; difficulties associated with realization of such feedbacks are discussed. It is proven that any distribution of indicants for two classes of stimuli can be reduced to the problem solved by the author earlier. It is also shown that the method of forced organization is more reliable (than self-organization) in systems using storage-type cells. Orig. art. has: 4 figures and 60 formulas.

SUB CODE: 13, 09 / SUBM DATE: 29Sep65 / ORIG REF: 002

Card 2/2

1. VIGUARDI, G. A.; CONFIDENTIAL; VIGUARDI, G. A.
2. USSR (66)
4. Scale Insects
7. Use of chemical measures against the scale insect. Sov. Agro. Sci., No. 11, No. 8, 1950.
9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

OTKHMESZURI, L.T.

Use of hydrogen cyanide in the control of grape worms. Soob, AN Gruz.  
SSR 14 no.9:541-548 '53. (MLRA 7:5)

1. Akademiya nauk Gruzinskoy SSR Instituta zashchity rasteniy Tbilisi.  
Predstavлено действител'ным членом Академии Л.А.Канчавели.  
(Scale insects) (Hydrocyanic acid gas)

CHVIE EBAKL, L. T.

"Results of the study of the biology and ecology of the striped Armyworm, *Spodoptera litura* (Lepidoptera: Noctuidae) and of the protection of plants against it."  
Georgian SSR, Tbilisi, 1975  
(Dissertation for the degree of Candidate of Agricultural Sciences).

SC: Muzhava Letua, Ph. D., Tbilisi.

CHAVCHANIDZE, T.N.; OTKHMEZURI, L.T.

Tomato russet mite (*Vasates lycopersici* (Massee) Lamb) and results  
of chemical tests for controlling it. Soob.AN Gruz.SSR 17 no.1:  
53-59 '56. (MLRA 9:8)

1. Akademiya nauk Gruzinskoy SSR, Institut zashchity rasteniy,  
Tbilisi. Predstavлено chlenom-korrespondentom Akademii L.P.  
Kalandadze.

(Tomatoes--Diseases and pests)

LOSEV, F.S.; OTHIRACI, A.A., nauchn. red.

[Fire prevention for industrial plants] Irotin, ... i zashchita promyslennogo ob"ekta. Moscow, Sverlag, 1964. 82 p. (MIA 18:1)

GEGENAVA, G.V.; OTKHMEZURI, L.T.

Nature of the action of a combined mixture of petroleum oil  
and thiophos. Soob. AN Gruz. SSR 30 no.5:637-644 My '63.  
(MIRA 16:11)

1. Institut zashchity rasteniy Gruzinskoy SSR, Tbilisi. Pred-  
stavлено академиком L.A.Kanchaveli.

USSR / General and Special Zoology. Insects. Harmful Insects and Pests. Fruit and Berry Crop Pests.

Abs Jour: Ref Zhur Biol., No 1, 1959, 234A.

Author : Utkhazuri, L. T.

Inst : Institute for Plant Protection, A. Georgian S.R.

Title : Results of the Study of Chemical Means of Controlling the Mealybug (*Pseudococcus citri* Risso).

Orig Pub: Tr. In-ta zashchity rast. A. Gruz SSR, 1957,  
12, 161-183.

Abstract: The use of a concentrated oil emulsion provides up to 100% destruction of the I and II stage larvae of the mealybug, of the III stage group to 91% and of females to 56%. The emulsion acts for 5-7 days. A 0.25% emulsion of con-

Card 1/2

OTKHMEZURI, O.V.

Tekhnik for secondary nephrectomy. Vest.khir. no.6:63-66 '61.  
(MIRA 15:1)

1. Iz kafedry urologii (zav. - prof. A.M. Gasparyan) 1-go  
Leningradskogo Meditsinskogo instituta im. I.P. Pavlova.  
(KIDNEYS--SURGERY)

OTKEMEZURI, V.P.; KURDGELIYA, R.I.

Clinical aspect and treatment of acute peritonitis in old age.  
(MIRA 16:2)  
Trudy Tbil. GIDUV 6:239-245 '62.  
(PERITONITIS) (AGED—DISEASES)

OTKHMEZURI, Z.B.

Mineralogy of the Amtkhel lead-zinc ore deposits. Soob. AN  
Gruz.SSR 21 no. 5:543-547 N '58. (MIRA 12:5)

1. AN GruzSSR, Geologicheskiy institut, Tbilisi. Predstavлено  
членом-корреспондентом Академии П.Д. Гамкрелидзе.  
(Abkhazia--Lead ores)  
(Abkhazia--Zinc ores)

OTKHMEZURI, Z.V.

Geological structure of the Amtkel lead and zinc deposit. Trudy  
AM Gruz.SSR.Min.i petr.ser. 5:209-236 '61. (MIRA 14:6)  
(Amtkel Valley--Lead ores) (Amtkel Valley--Zinc ores)

OTKHMEZURI, Z. V., Cand Geol-Min Sci -- (diss) "Geological structure and material composition of ore from the Amtkhel'skiy lead-zinc ore fields." Tbilisi, Tbilisi Univ Press, 1960. 17 pp; (Tbilisi State Univ im Stalin); 150 copies; free; (KL, 17-60, 144)

DZHAPARIDZE, L.N.; OTIASHVILI, D.G.

Electrochemical properties of a manganese electrode in alkaline  
electrolytes. Trudy Inst. prikl. khim. i elektrokhim. AN Gruz.  
SSR no. 1:73-86 '60. (MIRA 14:2)  
(Electrodes, Manganese) (Alkalies)

KAZAKOV, Mihail Vladimirovich; DEMIDOV, Petr Georgiyevich;  
CHERNOV, A.A., nauchn. red.

(Using wetting agents to extinguish fires) Izmerenie  
smashivayushchikh sredstv po tusheniu pozhara v Moskve, SSSR (Measuring  
agents for extinguishing fires) CIA RDP86

EZAKOV, Moisey Vladimirovich; PALKIN, Petr Georgiyevich;  
OTKIDACH, A.A., nauchn. red.

[Use of setting agents to extinguish fires] Primenenie  
smachivatelei dlya gasenija pozaryev. Leningrad, "Izdat. i perevod.  
izdat.", 1962. 52 p.

OTKIDACH, V.

Searchers. Sov. voin 43 no.22:34-35 N '61. (MIRA 15:2)  
(Automobiles, Military--Maintenance and repair)

3/065/61/000/003/002/004  
S194/E284

AUTHORS: Englin, B. A., Otkupshchikov, G. P. and  
Rubinshteyn, I. A.

TITLE: The Influence of Temperature and Fuel Quality on  
the Lacquering of Injection Nozzles

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961, No. 3,  
pp. 55-60

TEXT: Rig tests were made to study the influence of temperature and fuel quality on the lacquering of diesel engine injection nozzles. In the rig filtered fuel was delivered by a fuel pump to six nozzles each with its own measuring vessel. The nozzles were maintained at the required temperature by means of a thermostatic bath so that the fuel became hot and could oxidize and resins could form in it. The tendency of the fuel to form lacquer deposits on the nozzle needles was assessed from the thickness of the lacquer films on the non-working part of the needle and by the condition of the needles. The temperature at which, during the test period, a lacquer film just visible to the naked eye was formed was defined as the initial lacquering temperature. The fuels tested included diesel fuel grade

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3/065/61/000/003/002/004  
E194/E284

The Influence of Temperature and Fuel Quality on the Lacquering of  
Injection Nozzles

ΔС ГОСТ 2749-49 (DZ to standard GOST 4749-49) containing 0.157% sulphur, diesel fuel ΔТС-0.3 (DTS-0.3), ΔТС-1.0 (DTS-1.0) and ΔТС-1.16 (DTS-1.16) (in each case the number refers to the sulphur content), catalytic diesel fuel grade DTK with a sulphur content of 0.13 and synthetic diesel fuel obtained by hydrogenation of coal tar with a sulphur content of 0.035. The initial lacquering temperature depends very much on the fuel quality, thus in fuels DTS-1.16, DTK and the synthetic fuel lacquering had already commenced at a temperature of 124-132°C, the corresponding temperature for fuel DTS-1.0 was 166°C and for fuel DZ over 170°C. With increasing temperature lacquer formation was most intensive with the synthetic fuel. The results clearly show that the nozzle operating temperature in diesel engines is the main factor leading to lacquering of the nozzles. It was found that the actual resin content determined according to standard test method ГОСТ 8489-57 (GOST 8489-57) does not characterize the lacquering tendency of the fuel. Neither is there any direct relationship between the

Card 2/3

3/065/61/000/003/002/004  
E194/E284

The Influence of Temperature and Fuel quality on the Lacquering of  
Injection Nozzles

total sulphur content of the diesel fuel and the needle lacquering tendency. However, there is a certain inter-relationship between the mercaptan and adsorbable resin content of the fuels and the lacquering tendencies. Special tests revealed that the formation of lacquer in nozzles at temperatures below 190°C is due to mercaptans and adsorbable highly oxidized resinous components of the fuel. At temperatures of 190°C and above hydrocarbon components of the fuel can themselves form lacquer in the nozzles. The results relate to tests of 20 hours. It is also shown that when the diesel fuels are oxidized at temperatures above 120-130°C the resinous compounds are polymerized, which does not occur at lower temperatures. The intensity of the polymerization processes that takes place at these temperatures determines the degree of lacquering of the nozzles. There are 4 tables and 11 references.  
7 Soviet and 5 non-Soviet.

Card 3/3

OTKUPSHCHIRCV, G.P.; ANGLIN, E A

Causes of the destruction of fine-wooled felt plates of fuel  
filters (air) . tch topi.1 masel 7 no.3:56-57 Mr '62.

(MIRA 15:1)

(Filters and filtration  
(Diesel fuels))

ENGLIN, B.A.; OTKUPSHCHIKOV, G.P.; RUBINSHTEYN, I.A.

Effect of the temperature and quality of fuel on the deposition of  
tar on nozzle atomizers. Khim.i tekhn. i masel 6 no.3:55-60 Mr '61.  
(MIRA 14:3)

(Fuel) (Nozzles)

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2

OTKUPSHOBIKOVA, M.I.

Second Symposium on Machine Translation. MTI no.12:34-36 '64.  
(MIRA 18:3)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2"

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2

OTYUPSHCHIKOVA, M.I.

Rules for positions in connection with synthesis of organic  
synthesis), NTI no. 5(29-34) - 1951. (CIA RDP)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2"

OTKUPSHCHIKOVA, M.I.

Positional stage of the synthesis of the Russian sentence for machine  
translating. NTI no.11:31-33 '63. (MIRA 17:2)

OTKUPSHCHIKOVA, M.I.; FITIALOV, S.Ya.

System of morphological synthesis of the Russian language. NTI  
no.1:39-46 '64. (MIRA 17:3)

L 20095-65 EWT(d)/BXT/SED-2/EWP(1) Po-4/Pq-4/Pg-4/Pk-4 IJP(c)/ASD(a)-5/ESD(t)/  
AFHD(p)/ATTC(b)/RAEM(1)/RAEM(d)/SED(dp) BB/00

ACCESSION NR: AP4049560 S/0315/64/000/001/0039/0046

AUTHOR: Otkupshchikova, M. I.; Fitialov, S. Ya.

TITLE: A system of morphological synthesis for the Russian language

SOURCE: Nauchno-tehnicheskaya informatsiya, no. 1, 1964, 39-46

TOPIC TAGS: algorithm, machine translation, morphological synthesis, linguistics

ABSTRACT: The paper considers a morphological synthesis of the Russian language, designed for use in machine translation of English and Chinese into Russian. An algorithm of the Russian language must take into account the morphology of every Russian word form as well as the linear arrangement of word forms in a text. The determination of the alphabetical word form is a morphological part of the synthesis. The purpose of making such a synthesis is to reduce the size of the machine dictionary, used in machine translation, and basically allows determination of a basic word in its dictionary to which a text refers, as well as determination of the correct word form in context. The present paper describes a computer program which implements the morphological synthesis. Orig. art. has: 27 tables.

ASSOCIATION: none

Card 1/2

L 20095-65  
ACCESSION NR: AP4049560

SUBMITTED: 01Aug63 ENCL: 00 SUB CODE: DP  
NO REF Sov: 000 OTHER: 000

Card 2/2

OTLAKAN L.Ye., mashinist

More about the lever brake transmission of railroad motorcars.  
Elek. i top. tsiaga 5 no.11 10-20 N '61. (MIRA 14.11.)

1. Lokomotivnoye depo Omsk.  
(Railroad motorcars---Brakes)

MAVRODIN, A., ZOTTA, V., VOREL-STOENESCU, M., OTLEANU, D.

Untersuchungen aus der Gruppe der Sulfone (IV) Neue Sulfon-Hydrazid-Derivate.

SO: Pharmazeut Zent, September 1956, Unclassified.

GRIGORENCO, M.; ILIEA, T.; BAL, E.

Considerations regarding rural sanitary circumscription with two physicians. P. T.  
(Orcotirea Sanatatii in R.P.R.; Vol. 7, No. 1. Jan/Mar. 1957. Bucuresti,  
Romania)

SU: Monthly List of East European Accessions (EHAL) Ic. Vol. 6, No. 8, Aug 1957. Incl.

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2

OLEV, I.A., inzh.

Mechanized storage of lumber chips. Mekhanizirovannaya sklazhivaniye lesopodbytkov. No. 4:23-14. pp. '63.

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2"

OTLEV, I.A.; BYSTROV, S.A., inzh.; SHIRYAYEV, Yu.D., mladshiy nauchnyy sotrudnik; SVETLOVA, A.F., mladshiy nauchnyy sotrudnik.

Economics of the manufacture of piezothermoplastics. Nauch. trudy TSNITIMOD no.16:91-99 '63 (MIRA 17:3)

1. Zaveduyushchiy laboratoriyy spetsial'nogo oborudovaniya dlya proizvodstva novykh materialov TSentral'nogo nauchno-issledovatel'skogo instituta mekhanicheskoy obrabotki drevesiny (for Otlev). Laboratoriya spetsial'nogo oborudovaniya dlya proizvodstva novykh materialov TSentral'nogo nauchno-issledovatel'skogo instituta mekhanicheskoy obrabotki drevesiny (for Bystrov, Shirayev, Svetlova).

OTLEV, I.A., inzh.

Component calculation in the manufacture of particle boards and  
furniture panels. Der.prom. 10 no.5:13-14 My '61. (MIRA 14:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy  
obrabotki drevesiny.  
(Hardboard) (Furniture industry)

OTLEV, Ivan Aleksandrovich, kand. tekhn. nauk; OTLIVANCHIK, A.N.,  
red.; BOYKO, L.I., red.izd-va; GRECHISHCHEVA, V.I.,  
tekhn. red.

[Production of particle board in the U.S.S.R.] Proizvod-  
stvo struzhechnykh plit v SSSR. Moskva, Goslesbumizdat,  
1963. 82 p. (MIRA 17:1)

(Particle board)

OTLEV, I.A., inzh.

Standardization and simplification based on preferred numbers.  
Der. prom. ? no.10:3-5 0 '58. (MIRA 11:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy  
obrabotki dereva.  
(Standardization) (Simplification in industry)

BARDIN, I.P., akademik; DYMOW, A.M., prof., doktor khim.nauk; DIKUSHIN, V.I.; akademik; TSELIKOV, A.I.; OTLEV, I.A., inzh. (g. Khimki, Moskovecky oblasti); DEM'YANYUK, F.S., prof., doktor tekhn.nauk; RYBKIN, A.P., prof., doktor tekhn.nauk; YAKUSHEV, A.I., prof., dokt. tekhn.nauk; KIDIN, I.N., prof. doktor tekhn.nauk; KOROTKOV, V.P., dots., kand. tekhn.nauk; SHUKHGAL'TER, L.Ya., dots., kand.tekhn.nauk; KUKIN, G.N., prof., doktor tekhn.nauk.

Every specialist should know the principles of standardization.  
Standartizatsiya 22 no.4:34-40 Jl-Ag '58. (MIRA 11:10)

1.Chlen-korrespondent AN SSSR (for TSelikov). 2.Predsedatel' tekhniko-ekonomiceskogo soveta Mosoblsovnarkhoza (for Rybkin). 3.Direktor Moskovskogo instituta stali imeni I.V. Stalina (for Kidin). 4.Direktor Moskovskogo vechernego mashinostroitel'nogo instituta (for Korotkov).  
(Standardization--Study and teaching)

GRINSHPUN, S.D.; OTLEV, I.A.; SHIHYAYEV, Yu.D.; PETHOVA, Ye.N.

Method for manufacturing piezothermoplastics. Der.prom. 9 no.11:6-7  
■ '60. (MIRA 13:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy  
obrabotki dereva.

(Plastics)

OTLEV, I. A.

New system for processing sawing waste into technological  
chips. Der. prom. 12 no.2:5-6 F '63. (MIRA 16:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhaniko-  
cheskoy obrabotki dereva.

(Wood waste)

OTLEV, I.A., inzh.

Selecting rated dimensions in designing objects. Der. prom. 8  
no. 5:15-16 My '59. (MIRA 12:7)  
(Furniture industry)

OTLEV, I.A., inzh.

Diagrams for determining the moisture of mixtures of wood particles  
and glue. Der.prom. 9 no.4 14-15 An '60. (MIRA 13:9)  
(Wood using industries)

OTLEV, I.A., inzh.

Fastening abrasive cloth on cylinders of polishing machines.  
(MIRA 12:1)  
Der.prom. 8 no.1:23 Ja '59.  
(Grinding machines)

OTLEV, I.A., kand. tehn. nauk; ZAGOSKINA, G.V., red.

[Pressing particle board in multistory hydraulic presses]  
Pressovaniye struzhechnykh plit v mnogopetalnykh gidravli-  
cheskikh pressakh. Moskva: TSentr. nauchno-issl. in-t  
informatsii i tekhnicheskikh issledovanii po lesnoi, tsel-  
litovnoi, bumazhnoi, derevobrabatyvalushchii promyshl. i  
lesnogo khoz., 1964. 2- p. (MIRA 18:5)

1. Bryansk'iy tekhnologicheskiy institut (for Otlev).

L 05326-67 DS  
ACC NR: AF7000218

(N)

SOURCE CODE: PO/0099/66/040/002/0281/0284

29

B

CZERNIAWSKI, M. and OTLEWSKA, M. of the Department of Inorganic Chemistry,  
N. Copernicus University (Aatedra Chemii Nieorganicznej Uniwersytetu M.  
Copernika) Torun.

1

"Study on the Structure of the Double Layer of Colloidal Electrolytes. VIII.  
Polydispersity of Aqueous Solutions of Cetyl Trimethylammonium Bromide  
and Cetyl Pyridinium Bromide"

Warsaw, Roczniki Chemii, Vol 40, No 2, 1966, pp 281 - 284,

Abstract (Authors' English abstract): The polydispersity of cetyl-trimethyl-  
ammonium bromide (CTAB) and cetyl-pyridinium bromide has been measured by  
the ultrafiltration method. [JPRS: 36,002]

TOPIC TAGS: colloid chemistry, electrolyte

SUB CODE: 07 / SUBM DATE: 21 Jul 65 / ORIG REP: 001 / OTH REP: 002

KH

Card 1/1

0921 0253

POPOVA, Ye., OTIVANCHIK, A.

Buildings, Prefabricated

Conveyer assembly of large panels for standardized houses. Les. prom. 12 no. 2:28-3  
of cover. F '52.

9. Monthly List of Russian Accessions, Library of Congress, July <sup>2</sup> 1952, Inc..

SHORYGINA, N., kand.tekhn.nauk; OTLIVANCHIK, A., kand.tekhn.nauk

Using synthetic materials in construction. Na stroi. Mosk. 1 no. 7:  
15-16 Jl '58. (MIRA 11:9)  
(Plastics)

OTLIVANCHIK, A.N., red.

[Manufacture of hardboard; bibliographical index of Soviet and foreign literature for the period from 1950-1959] Proizvodstvo drevesnykh plit; bibliograficheskii ukazatel' otechestvennoi i inostrannoi literatury za 1950-1959 gg. Moskva, 1960. 157 p.  
(MIRA 16:1)

1. Moscow. Tsentral'naya nauchno-tehnicheskaya biblioteka lesnoy i bumazhnoy promyschlennosti.

(Bibliography--Hardboard)

1. OTLIVANCHIK, A. N.
2. USSR (600)
4. Glue
7. Carbamide-formaldehyde glue K-17 Eng. Der. i lesokim. prom. l no. 4.  
Jl '52.
9. Monthly List of Russian Acquisitions, Library of Congress, March 1953. Unclassified.

CHIVINSKI, A. N.

Dissertation: "Investigation of the retention of water for the Purification of Sulfur,"  
Grad Tech Sci, Forestry Institute, Moscow, Lenin grad, 1951. Defense faculty of Forest  
Khiriya, Moscow, No 5, Part 4.

On 10/10/1951, 1951 at 000000

LEONT'IEV, N.L. [author]; OTLIVANCHIK, A.N. [reviewer].

Manual for the statistical treatment of observation results ("Statistical treatment of observation results." N.L.Leont'ev. Reviewed by A.N.Otlivan-chik). Der. i lesokhim. prom. 2 no.8:31 Ag '53. (KLIMA 6:7) (Statistics) (Leont'ev, N.L.)

OPLIVANCHIK, A.N., inzhener.

Collagen glue properties as a function of viscosity. Der. i lesokhim.prom.  
2 no.11:5-9 N '53. (MLRA 6:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki  
drevesiny. (Glue)

OTLIVANCHIK, A.N., inzhener.

Durability of tenon joints. Der. i lesokhim.prom. 3 no.10:8-9  
0 '54. (MLRA 7:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy  
obrabotki drevesiny.  
(Woodwork)

IL'INSKIY, S.A., kandidat tekhnicheskikh nauk; OTLIVANCHIK, A.N., kandidat  
tekhnicheskikh nauk; BLEKHMAN, A.B., inzhener, ~~inzhener~~, V.P.,  
inzhener.

Fit and tolerance standards for furniture joints and connective units.  
Der.prom. 4 no.2:8-12 F '55. (MIRA 8:4)

1. TsNIIMOD (for Il'inskiy and Otlivanchik). 2.TsPKB Glavmobel'-  
prom (for Blekhman and Mal'tseva).  
(Furniture—Standards)

PASHINA, V.P., kandidat tekhnicheskikh nauk; OTLIVANCHIK, A.N., kandidat tekhnicheskikh nauk; YANSON, E.R., kandidat tekhnicheskikh nauk.

A useful book. ("Chemistry and technology of adhesives." A.G. Zabrodkin, Reviewed by V.P. Pashina, A.N. Otlivanchik, E.R. Ianson). Der.prom. 5 no.2:25 # '56. (MLRA 9:5)

1. L'vovskiy lesotekhnicheskiy institut (for Pashina, Yanson);
2. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny (for Otlivanchik).  
(Zabrodkin, A.G.) (Adhesives)

OLIVANER, A.H., and, Tech. Sec.

Shipboards from synthetics, and the objective of the project is to have them in construction. It is Inf. Sec. Sec. 3.0001, dated 10 January 1962.

OTLIVENCHIK, A.N., kand. tekhn. nauk; MILENKOVA, A.P., kand.

Structural boards and products from resin particles in combination  
with synthetic binders. Sov. inform. otech. (Soviet technical information)

'62.

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2

CLIVINGER, A.H., AND T. TUTTLE, JR.

Clipboard for a letter to William J. Clegg  
from W.M. Rutherford, Jr., dated 1947

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2"

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2

OTLIVANCHIK, A.N.; PEPER, A.I.; DMITRIYEV, G.A.

Fireproofing of wood fiberboards. Iss. Publ. No. 16-196-1  
Ja '66.

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520017-2"

OTLIVANCHIK, A.N., kand. tekhn. nauk; DMITRIYFVA, G.A., inzh.

Resin of composite phenols for the preparation of wood  
and fiber slabs. Stroi. mat. 10 no.5:15 My '64.

(MIRA 17:9)

OTLEV, Ivan Aleksandrovich, kand. tekhn. nauk; OTLIVANCHIK, A.N.,  
red.; BOYKO, L.I., red.izd-va; GRICHISHCHEVA, V.I.,  
tekhn. red.

[Production of particle board in the U.S.S.R.] Froizvod-  
stvo struzhechnykh plit v SSSR. Moskva, Goslesbumizdat,  
1963. 82 p.  
(Particle board)

KOSHMIN, V.G., kand. tekhn. nauk; MAKOTINSKIY, M.P., kand. arkh.; MUJTS, V.O., kand. arkh.; KUDINA, M.A., arkh.; SILUANOVA, G.V., arkh.; SHORYGINA, N.V., kand. khim. nauk. Prinimali uchastiye: BOGUSLAVSKIY, A.I., inzh.; ZARUBITSKIY, A.Ye., inzh.; LIVSHITS, A.M., inzh.; MASHINA, N.N., inzh.; OTLIVANCHIK, A.N., kand. tekhn. nauk; ROMANOVA, L.A., inzh.; CHERKINSKIY, Yu.S., inzh.; ANDREYEV, V.S., retsenzent; IOFAN, B.M., retsenzent; KRIPPA, A.I., arkh., retsenzent; GURVICH, E.A., red.izd-va; BRUSINA, L.N., tekhn. red.

[Catalog of finishing materials and articles] Katalog ot-delochnykh materialov i izdelii. Pod red. M.P.Makotinskogo. Moskva, Gosstroizdat. Pt.1.[Plastics; polymer finishing materials and articles] Plastmassy; polimernye otdelochnye materialy i izdeliya. 1962. 119 p. (MIRA 16:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Andreyev, Iofan, Krippa).

(Finishes and finishing--Catalogs) (Plastics)

KOSHKIN, V.G., kand. tekhn.nauk; MAKOTINSKIY, M.P., kand. arkh.; MUNTS,  
V.O., kand. arkh.; RUDINA, M.A., arkh.; SILUANOVA, G.V., arkh.;  
SHORYGINA, N.V., kand. khim. nauk; Prininali uchastiye:  
BOGUSLAVSKIY, A.I., inzh.; ZARUBITSKIY, A.Ye., inzh.; LIVCHITS,  
A.M., inzh.; MASHINA, N.N., inzh.; OTLIVANCHIK, A.N., kand.  
tekhn. nauk; ROMANOVA, L.A., inzh.; CHERKINSKIY, Yu.S., inzh.;  
ANDREYEV, V.S., retsentent; ICFAN, B.M., retsentent; KRIPPA,  
A.I., arkh., retsentent; GURVICH, E.A., red.izd-va; BRUSINA,  
L.N., tekhn. red.

[Catalog of finishing materials and products] Katalog otdeloch-  
nykh materialov i izdelii. Moskva, Gosstroizdat. Pt.1.[Plastics;  
polymer finishing materials] Plastmassy; polimernye otdelochnye  
materialy. 1962. 119 p. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroi-  
tel'nykh materialov. 2. Chleny-korrespondenty Akademii stroitel'-  
stva i arkhitektury SSSR (for Andreyev, Iofan, Krippa).  
(Plastics) (Building--Details)

OTLIVANCHIK, A.N., kand. tekhn. nauk; Prinimali uchastiye: KRASTOVSKIY  
N.V., kand. tekhn. nauk; MARAVIN, B.L., inzh.; GUZMAN, M.A.,  
red. izd-va; GOL'ZERG, T.M., tekhn. red.

[Manufacture and use of particle boards] Proizvodstvo i prime-  
nenie drevesno-struzhechnykh plit. Moskva, Gosstroizdat,  
1962. 310 p. (MIA 15:10)

(Hardboard)

OTLIVANCHIK, A.M.: SLUCHAYEVA, L.M.; GORDEYEV, P.A., red. izd-va;  
KUNIN, V.M., nauchnyy red.; RUDAKOVA, N.I., tekhn. red.

[Experience with particle board for floors] Opyt primeneniia  
drevesno-struzhechnykh plit dlja polov. Moskva, Gosstroizdat,  
(MKhA 15:6)  
1962. 47 p.  
(Hardboard) (Floors)

KHOMENKO, Z.S.; OTLIVANCHIK, A.N.; KORCHAGINA, I.A.; MAKAROVA, M.M.

Fibrous slabs made of straw. Stroi. mat. 7 no.7:14-1' J1  
'61. (MIRA 14:7)  
(Straw) (Building materials)

OTLIVANCHIK, A.N.

Manufacture of panels from plant raw materials and synthetic resins.  
Plast.massy no.10;49-51 '60. (MIRA 13:12)  
(Building materials) (Resins, Synthetic)

OTLIVANCHIK, A.N., kand.tekhn.nauk

Selecting synthetic resins for making particle board. Strei.mnt.  
6 no.5:13-15 My '60. (MI A 17:7)  
(Gums and resins, Synthetic)  
(Hardboard)

OTLIVANCHIK, A.N., kand. tekhn.nauk.; BANN, Aleksandr Isaakovich, red.

[Simplified production of panels made of wood shavings at  
woodworking plants and sawmills] Uproshchennoe proizvodstvo  
drevesino-struzhechnykh plit na derevoobrabatyvayushchikh i  
lesopil'nykh zavodakh. Moskva, M-vt lesnoi promyshl. SSSR,  
1957. 37 p.

(Wallboard)

(MIRA 11:11)

OTLIVANCHIK, A.N., kand.tekhn.nauk

Particle board made with synthetic resins. Stroil. mat. 6 no.12:  
12-14 D '60. (MIRA 13:11)  
(Hardboard)

OTLIVANOV, B.M., inzh.

Operation of reserve transformers. Energetik 8 no.7:  
7-8 Jl '60. (MIRA 13:8)

(Electric transformers)  
(Electric power plants--Equipment and supplies)

OTLIVANOV, S.O., inzhener; SOKOLOV, I.A., inzhener.

Thermocouples for the temperature control of liquid steel. Stal'  
16 no.5:409-415 My '56.  
(MLRA 9:8)

1. Kuznetskiy metallurgicheskiy kombinat.  
(Smelting) (Thermocouples)

OTLIVANOV, S. G., and SOKOLOV, I. A.

"Production Control of Temperatures in Liquid Steel by Means of Thermocouples" a paper read at the International Metallurgists' Conference, Moscow 26-30 June 56.

SO: CS-3,302,240, 11 Jan 57.

VASIL'YEV, A.N.; NOVGORODSEV, N.P.; OTLIVANOV, S.O.; TVERSHIN, O.O.

Use of thermocouples for temperature control of liquid steel in  
steel smelting sections of the Kuznetsk Metallurgical Combine.  
Zav. lab. 22 no.9:1127-1130 '56. (MLRA 9:12)

1. Kuznetskiy metallurgicheskiy kombinat.  
(Thermocouples) (Steel) (Smelting)

SOV/112-57-6-12591

Translation from: Referativnyy zhurnal. Elektrotehnika, 1957, Nr 6, p 139 (USSR)

AUTHOR: Otlivanov, S. G.

TITLE: Measurement of Liquid Steel Temperatures by Thermocouples in the Course of Melting (Zamer temperatury zhidkoy stali termoparami po khodu plavki)

PERIODICAL: Tr. nauch.tekhn. o-va chernoy metallurgii, 1956, Vol 9, pp 73-77

ABSTRACT: An immersion thermocouple design used at the Kuznetsk Metallurgical Combine is described. Results are presented of utilizing such thermocouples for measuring bath temperature in the final melting period and for measuring it in a steel-teeming ladle. Measurements of bath temperatures by two thermocouples showed that any discrepancy between their readings has never exceeded 5% if the thermocouples were in service for 16-18 measurements or less. The investigation has proved that the thermocouple cold-end temperature does not exceed 50°C at the moment of measurement. Melting technology was improved as a result of the above measurements. Use of thermocouples reduced the

Card 1/2

SOV/112-57-6-12591

Measurement of Liquid Steel Temperatures by Thermocouples in the Course

rejects in stainless steel and in ShKh16 steel. For temperatures higher than 1,600°C, tungsten-molybdenum thermocouples are recommended and automation of measurements is considered necessary.

I.G.A.

Card 2/2

20(8)

PHASE I: BOOK EXPLANATION

SOV/CL17

Soviet Institute for Experimental Physics, Institute of Methods of Radioelectronics  
Leningrad, Leningrad, 1950.

**Experimental methods in metallography at high temperatures** (in Russian).  
Proceedings of the Conference on Experimental Techniques and Methods of Investigation  
at High Temperatures. Moscow, All Union, 1959. 839 p. (Series:  
Akademia Nauk SSSR. Institut Metallofizika. Kondens. po fiziko-  
khimicheskim issledovaniyam) 2,200 copies printed.

Rep. Ed.: A. M. Samarin. Corresponding Member, USSR Academy of  
Sciences; Ed. of Publishing House: A. I. Banerjee.

**PURPOSE:** This book is intended for metallurgists and metallurgical  
engineers.

**CONTENTS:** This collection of scientific papers is divided into six  
parts: 1) thermodynamic activity and diffusion of high-temperature  
processes; 2) constructional diffusive studies; 3) physical properties  
of liquid metals and alloys; 4) new analytical methods and pro-  
cedures; 5) property; and 6) general questions.  
For more specific coverage, see Table of Contents.

Olivnykov, S. G., and V. A. Sokolov. Industrial Application of

604

Thermocouples for Controlling the Temperature of Liquid Steel.  
The article describes the practice of the Dnepropry Metal-  
lurgical Plant in Stalingrad of using submerged platinum-  
platinum-rhodium thermocouples for controlling the temperature  
of liquid steel. Optimum limits of temperature were estab-  
lished for various periods during the final heating. Some  
advantages of this method of temperature control are: fewer  
breaks tapped at too high or too low a temperature, three-fold  
reduction in electric-furnace stainless-steel ingot scrapped  
because of surface defects, improved quality of microstructure,  
and longer life of furnace hearths and roofs. Some improve-  
ments must be made, however, to extend the life of the thermo-  
couples.

Brod-Shapiro, B. I., and R. V. Prud'antsev. Thermocouple for Short-  
Time Measurement of Temperature Reaching 2100°C.  
A new thermocouple has been developed for short-time measure-  
ments of liquid-steel temperature. The positive thermocou-  
ple is tungsten, and the negative a columbium alloy contain-  
ing 0.5 percent aluminum. The thermocouple can measure tem-  
perature within a range of 100-2100°C, developing a maximum  
thermoelectric force of the order of 20 mV.

Hill  
PMT

OTLIVANOV, S. G., AND SOKOLOV, I. A.

"Production Control of Temperatures in Liquid Steel by Means of Thermocouples"  
lecture given at the International Metallurgists' Conference, Moscow 26-30 June 56.

Source CS-3,302,240, 11 Jan 57

OTLIVNOY, I.F., inzh.; KULAKHMETOV, Sh.Kh., inzh.; TURCHIN, N.Ya., inzh

Constructing a reinforced concrete hyperbolic cooling tower.  
Stroi.prom. 27 no.12:16-19 D '49. (MIRA 13:2)  
(Precast concrete construction)  
(Cooling towers)

O. T. LIVNOY 1

97-57-9-9/17

AUTHOR: Alekseyev, S. N. (Candidate of Technical Sciences).  
TITLE: Damage to Columns of Reinforced Concrete Water-Cooling Tower Built From Concrete Liable to Deterioration by Frost. (Razrusheniye kolonn zhelezobetonnoy gridirni iz nemorozostoykogo betona).

PERIODICAL: Beton i Zhelezobeton, 1957, Nr. 9, pp. 368-369. (USSR).

ABSTRACT: The reinforced concrete hyperbolic-shaped water-cooling tower of the TETs, "o.15 of the Mosenergo, discussed in an article entitled "Construction of a Reinforced Concrete Hyperbolic Water-Cooling Tower" by I. F. Otlivnoy, Sh.Kh. Kulakhmetov and N. Ya. Turchin (Ref.1), is carried on 72 inclined pre-cast reinforced concrete columns, octagonal in section, and 340 mm high. The columns are reinforced with 9 steel bars of 24 mm diameter, and spiral reinforcement of 9 mm diameter at 100 mm intervals. Concrete Mark 140 should have been used, but the columns were made from concrete Mark 300, and no frost-resistance tests were carried out. The cement used was of the pozzolana Portland cement type Mark 400 having slump test values of 4-5 cm, with a water/cement ratio of 0.59. 1 m<sup>3</sup> of this concrete contains 300 kg cement, 601.8 kg of sand and 1290 kg of aggregate. Test cubes after 7 days showed strength of 113.4 kg/cm<sup>2</sup>, and after 29 days

Card 1/3

27-57-0-9/17

Damage to Columns of Reinforced Concrete Water-Cooling Tower Built from Concrete Liable to Deterioration by Frost.

199.6 kg/cm<sup>2</sup>. The sand and aggregate were from the Petrovsk pit. The sand was not sieved and the aggregate was not washed. The concrete was mixed in mixers, put into wooden form-work, and consolidated by 1-21 type vibrator. The concrete was hardened by steam-curing at a temperature of 70-80°C for 18-24 hours. The final strength of the concrete was 80-190 kg/cm<sup>2</sup>. The water-cooling tower was put into use in 1955. In the spring of 1957, considerable deterioration of the columns occurred, especially where the cooled water flowed. The columns developed cracks on the surface, and the concrete broke off in slabs, so that the spiral reinforcement was in many cases exposed (see Fig.1). The lower part of the columns were covered by deposits of calcium carbonate, the result of alkalization due to water (see Fig.2). Some cracks were 5-7 cm deep, exposing not only the spiral reinforcement, but also the main reinforcement. This is caused by freezing of porous concrete saturated with water. The low frost-resistance property of the concrete is due to insufficient density caused by the use of pozzolana Portland cement and the high water content. The damaged parts

Card 2/3

97-57-9-9/17

Damage to Columns of Reinforced Concrete Water-Cooling Tower Built  
From Concrete Liable to Deterioration by Frost.

of the column were removed, and the columns were  
cased in steel mesh, and a fresh layer of concrete  
applied. Experience shows that for this type of con-  
struction, high density concrete should be used to  
prevent destruction by ice formation in the pores.

AVAILABLE: Library of Congress.

1. Water tower-Construction
2. Concrete-Reinforced
3. Concrete-Deterioration
4. Concrete-Weather factors

Card 3/3

USSR/Electricity - Power Plants  
Boilers

Apr 50

"Adjustable Steel Casing Used in Building Temporary End Wall of a Boiler Room," I. F. Otlivnoy,  
M. Ya Turchin, Engineers, 1 p

"Elek Stants" No 4

In 1949 the boiler house at a TETs (District Heating and Power Plant) near Moscow was enlarged. It was necessary to build temporary end wall. Describes how this was done, with slag concrete, using steel casing molds. Job was done in one month without skilled bricklayers. Includes diagram and photograph.

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S/055/59/000, 06/05/027

AUTHOR: Otmakhova, I.P.

TITLE: Outflow of a Rarefied Gas Through a Diffusor (Confusor)

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, No.6, pp. 51-57

TEXT: The author considers the gas motion in a diffusor the generator of which forms an angle  $\gamma$  with the central axis and which combines two containers I and II with eachother. The investigation is carried out in the region of free molecular flows for a constant temperature and under the assumption of diffuse reflections at the walls. The probability that a molecule of the container I flows into the container II is

$$(1) \quad w = w_{ss}(0, L) + \int_0^L w_{sr}(\xi, x) w(x) dx,$$

$$\text{where } L \text{ is the length of the diffusor, } w_{sr}(\xi, x) = \frac{\partial w_{ss}(\xi, x)}{\partial x} = \\ = \frac{1}{r_0^2 + 2r_0 \xi \operatorname{tg} \gamma} \left\{ \frac{(x - \xi)^2 + 3(x - \xi)r_0 \operatorname{tg} \gamma + 2(r_0^2 + 2r_0 \xi \operatorname{tg} \gamma)}{\sqrt{(x - \xi)^2 + 4(x - \xi)r_0 \operatorname{tg} \gamma + 4(r_0^2 + 2r_0 \xi \operatorname{tg} \gamma)}} - [r_0 \operatorname{tg} \gamma + (x - \xi)] \right\},$$

Card 1/2

OTLOOT, Kh. P.

Otloot, Kh. P., Cand Tech Sci -- (diss) "Rational designs of cow barn floors from the point of view of reducing heat absorption from the organism of the reclining animal." Tallin, 1957. 26 pp with ill (Min of Higher Education USSR. Tallin Polytech Inst. Chair of Architecture and Architectural Constructions). 120 copies Bibliography: pp 25-26 (KL, 20-58, 98)

*Original*

AUTHOR: Otmakhov, I. (Irkutsk)

84-12-22/49

TITLE: A New Polyclinic Hospital (Novaya poliklinika-bol'nitsa)

PERIODICAL: Gruzhdanskaya aviatsiya, 1957, Nr 12, p 12 (USSR)

ABSTRACT: The short note reports on the new airport hospital in Irkutsk. The hospital with 35 beds is equipped with perfect therapeutic apparatus, a most modern X-ray installation, and modern aids for functional diagnostics. There is a special laboratory for aviation medicine. A pressure chamber is being installed for training and testing the flight personnel. Doctors of the hospital under engineer M. Sheynin as instructor, have started studying the work conditions of aircraft crew members.

AVAILABLE: Library of Congress

Card 1/1

OTMAKHOV, I. (Irkutsk)

In honor of the sixth five-year plan. Grashd.av. 13 no.2:7 P 'st.  
(MLRA 9:5)  
(Kremlev, Georgii Vasil'evich)

L 64327-65 EXP(j)/EMT(m)/EXP(i)/EXP(b)/T/EXP(t) IJP(c) JD/EG/68

ACCESSION NR: AT5020449

UR/0000/64/000/000/0047/0058 38

AUTHOR: Presnov, V. A. (Professor); Kataev, G. A.; Lyuze, L. L.; Batuyeva, Ye. N.  
Otmakhov, I. I.

TITLE: The effect of film-forming substances on the electrical and physical properties of the surface of germanium

SOURCE: Mezhvizovskaya nauchno-tehnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 47-58

TOPIC TAGS: surface property, germanium semiconductor, electric property, crystal surface, semiconductor research, electron recombination

ABSTRACT: The effect which film-forming substances have on the value and stability of the surface potential, and on the density and energy configuration of the levels of "fast" states is determined by the nature of the substances which appear in the film composition. To study the use of films made up of high molecular materials for stabilizing semiconductor devices, the authors investigated several lacquers as well as a number of components used in various lacquers and enamels with

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ACCESSION NR: AT5020449

regard to their effect on the electrical and physical properties of the surface of germanium. Specimens with dimensions of  $1.5 \times 0.6 \times 0.3$  cm were prepared from germanium with a resistivity  $\rho = 32 \Omega \cdot \text{cm}$ . Before measurements were made, the specimens were etched for 3 minutes in boiling Perhydrol and washed several times in boiling water. The lacquer treatment was done according to instructions. In making the measurements, use was made of the field effect with a strong sinusoidal signal with stationary photoconductivity. Field effect curves are given for etched germanium and for germanium treated with glyptal enamel, V-1 lacquer, drying oil and rosin. Recombination and charge curves are given for treatment with V-1 lacquer, drying oil and rosin. Treatment in glyptal enamel changed the negative charge slightly. Relaxation of surface conductivity in vacuum was considerably stronger for samples treated in V-1 lacquer than for the etched surface. Treatment of semiconductor devices in V-1 lacquer produces stable parameters. The high current amplification factor and low reverse current are due to low surface recombination since the operating point is beyond the maximum for surface recombination at the surface potentials produced by the treatment. The low reverse currents of the collector are due both to low recombination on the surface and to the absence of leakage along the surface. The energy configuration and concentration of surface states were altered.

Card 2/3

L 64327-65

ACCESSION NR: A15020449

by treatment in drying oil. The effect of film-forming substances on the change in surface potential is apparently determined chiefly by two factors: substances in the film composition which have donor-acceptor properties, and substances (or individual groups of molecules) which may interact with oxygen, the chief factor in determining the charge in "slow" states. The change in surface potential from the first mechanism is determined by the concentration and nature of the donor-acceptor substances in the composition of the film. The chief factor in the cases studied seems to have been the second mechanism, i.e. interaction between absorbed oxygen and substances appearing in the composition of the film. It may be assumed that in some cases (drying oil, rosin) the appearance of a donor level and the disappearance (or change) of the energy configuration in the acceptor level is caused by donor groups (bonds) in the molecules of these substances, e.g. the double bond of the carbonyl, ether or alcohol radicals. Orig. art. has: 8 figures.

ASSOCIATION: none

SUBMITTED: 06Oct64

ENCL: 00

SUB CODE: S3, EC

NO REF Sov: 003

OTHER: 001

Card 5/3